

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-2. (Canceled)

3. (Currently Amended) A functional particle preparing method comprising steps of:

treating either one of a hollow particle or a porous particle having a pore on the surface thereof by plasma irradiation under a reduced pressure, ~~and~~

graft polymerizing at least one type of monomer onto the surface of the plasma irradiated particle by ~~contact between~~ contacting the at least one type of monomer ~~and with~~ the surface of the plasma irradiated particle so as to substantially fill the pore of said particle with grafted polymers of said monomer;

soaking said graft polymerized particle in a solution having an inclusion to be inserted into said graft polymerized particle, where the solution having the inclusion is adjusted such that the grafted polymers shrink to form openings that allow said inclusion to pass into said pore or through said pore into a cavity region within said particle;

adjusting the solution having the inclusion such that the grafted polymers expand to close said openings and to prevent said inclusion from passing through said pore such that a functional particle having inclusion impregnated therein is obtained; and

separating said function particle from said solution; wherein

during said plasma irradiation, plasma intensity and/or ~~the~~ degree of vacuum are controlled; and

during said ~~contact with said monomer for graft polymerization~~ contacting the at least one type of monomer with the surface of the plasma irradiated particle, at least one of the requirements for monomer concentration, graft polymerization temperature, and graft

polymerization time is adjusted to control graft polymerization yield of said grafted polymers;  
and polymers.

~~\_\_\_\_\_ a solution having an inclusion to be inserted into said particle is adjusted on a  
first condition that the grafted polymers substantially filling the pore of said functional  
particle is shrunk or hydrophilic;~~

~~\_\_\_\_\_ said functional particle is soaked in the solution having an inclusion which is  
adjusted on the first condition;~~

~~\_\_\_\_\_ said solution having an inclusion is adjusted on a second condition that the  
grafted polymers of the functional particle is expanded or hydrophobic, and~~

~~\_\_\_\_\_ an inclusion impregnated functional particle is separated from said solution  
having an inclusion.~~

4. (Currently Amended) A functional particle obtained by a process comprising:  
treating either one of a hollow particle or a porous particle having a pore on  
the surface thereof by plasma irradiation,

graft polymerizing at least one type of monomer onto the surface of the plasma  
irradiated particle by contacting the at least one type of monomer with the surface of the  
plasma irradiated particle so as to substantially fill the pore of said particle with grafted  
polymers of said monomer; and

impregnating said pore and/or a cavity region of said particle with an  
inclusion; wherein

during said plasma irradiation, reduced pressure, plasma intensity and/or  
degree of vacuum are controlled, and

during said contacting the at least one type of monomer with the surface of the  
plasma irradiated particle, at least one of the requirements for monomer concentration, graft

polymerization temperature, and graft polymerization time is adjusted to control graft polymerization yield of said grafted polymers.

~~having graft polymerization yield of grafted polymers obtained from at least one type of monomer, the grafted polymers substantially filling a pore of said particle, is controlled by adjusting a reduced pressure, plasma intensity and/or the degree of vacuum while treating either one of a hollow particle or a porous particle having a pore on the surface thereof by plasma irradiation, and adjusting at least one of requirements for monomer concentration, graft polymerization temperature, and graft polymerization time while graft polymerizing the at least one type of monomer onto the surface of the plasma irradiated particle by contact between the at least one type of monomer and the surface of the plasma irradiated particle, wherein the functional particle is an inclusion impregnated functional particle in which the pore and/or a cavity region of said functional particle are impregnated with an inclusion.~~

5-6. (Canceled)

7. (Currently Amended) A functional particle preparing method according to claim 3, wherein contacting the at least one type of monomer with the surface of the plasma irradiated particle comprises soaking said plasma irradiated particle is soaked in a monomer solution or brought into contact contacting said plasma irradiated particle with a monomer gas.

8. (Canceled)

9. (Currently Amended) A functional particle according to claim 4, wherein contacting the at least one type of monomer with the surface of the plasma irradiated particle comprises soaking said plasma irradiated particle is soaked in a monomer solution or brought into contact contacting said plasma irradiated particle with a monomer gas.

10. (Currently Amended) A functional particle preparing method according to claim 3, wherein said graft polymerizing further comprises contacting said plasma irradiated

particle is ~~brought into contact~~ with a cross-linking agent simultaneously with or subsequently to ~~said contact with the monomer~~ contacting the at least one type of monomer with the surface of the plasma irradiated particle.

11. (Previously Presented) A functional particle preparing method according to claim 3, wherein said particle consists of at least one of an organic macromolecule and an inorganic macromolecule.

12-15. (Canceled)

16. (Previously Presented) A functional particle prepared by the functional particle preparing method according to claim 3.

17. (Currently Amended) A functional particle according to claim 16, wherein ~~said grafted polymers fill said pore at high density.~~ shrink to form openings that allow said inclusion to pass into said pore or through said pore into said cavity region within said particle at temperatures lower than a lower critical solution temperature and said graft polymers expand to close said openings and to prevent said inclusion from passing through said pore at temperatures higher than the lower critical solution temperature.

18. (Currently Amended) A functional particle according to claim 16, wherein ~~said grafted polymers fill said pore at low density.~~ shrink to form openings that allow said inclusion to pass into said pore or through said pore into said cavity region within said particle at temperatures higher than a lower critical solution temperature and said graft polymers expand to close said openings and to prevent said inclusion from passing through said pore at temperatures lower than the lower critical solution temperature.

19. (Currently Amended) A functional particle prepared by the functional particle preparing method according to claim 3, wherein said grafted polymers of said functional particle ~~fill the pore at high density.~~ shrink to form openings that allow said inclusion to pass into said pore or through said pore into said cavity region within said particle at temperatures

lower than a lower critical solution temperature and said graft polymers expand to close said openings and to prevent said inclusion from passing through said pore at temperatures higher than the lower critical solution temperature.

20. (Currently Amended) A functional particle prepared by the functional particle preparing method according to claim 3, wherein said grafted polymers of said functional particle ~~fill the pore at low density.~~ shrink to form openings that allow said inclusion to pass into said pore or through said pore into said cavity region within said particle at temperatures higher than a lower critical solution temperature and said graft polymers expand to close said openings and to prevent said inclusion from passing through said pore at temperatures lower than the lower critical solution temperature.

21. (Currently Amended) A functional particle according to claim 19, wherein the functional particle is a time-release particle in which said ~~pore is impregnated with an inclusion which~~ is released in response to the extent to which the pore is filled with the grafted polymers and/or in response to variations in temperature around said functional particle.

22. (Currently Amended) A functional particle according to claim 20, wherein the functional particle is a time-release particle in which said ~~pore is impregnated with an inclusion which~~ is released in response to the extent to which the pore is filled with the grafted polymers and/or in response to variations in temperature around said functional particle.